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VI

THE GOPHER-SNAKES OF WESTERN NORTH AMERICA

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The snakes of the genus *Pituophis,* commonly are called gopher or bull snakes. They occur in the United States from the Atlantic to the Pacific coasts. In the region lying west of the Rocky Mountains they are widely distributed, and have been taken in Idaho, Utah, Nevada, Arizona, Washington, Oregon and California. Their range also includes Lower California and certain of the coastal islands.

Although herpetologists now generally agree that three kinds of *Pituophis* occur in this western territory, the differential characters and the distribution of these forms never have been clearly set forth. Further study of these snakes,

therefore, seems well worth while. In undertaking this study we have again made use of material in the collections of Stanford University and the University of California, and, for this privilege, we are again indebted to Professors Charles H. Gilbert and John O. Snyder of Stanford University, and Dr. Joseph Grinnell of the University of California. The snakes in the collection of the University of California are distinguished by the letter C prefixed to their numbers in the lists of specimens; those from Stanford University, by the letter S. When no letter is attached to its number the specimen is in the collection of the California Academy of Sciences.

Several names have, in the past, been based upon, or applied to, gopher-snakes from the area under consideration.

In 1835, Blainville described two kinds of gopher-snakes from specimens collected by M. Botta in "California", a term which, as then used, included Lower California. These he called *Coluber catenifer* and *Coluber vertebralis*. In 1842, Holbrook established the genus *Pituophis* for the eastern bull-snake, which Daudin had described, in 1803, as *Coluber melanoleucus*. In 1853, Baird and Girard placed Blainville's *Coluber catenifer* in this genus *Pituophis,* and the following year Duméril and Bibron made the same disposition of his *Coluber vertebralis*.

Cope, in 1860, described the gopher-snake of the Cape Region of Lower California under the name *Pityophis hæmatois,* from specimens collected by John Xantus at Cape San Lucas. In more recent publications, however, Cope (1875) and other authors have recognized Blainville's description of *Coluber vertebralis* as referring to this Lower California species and, therefore, have called it *Pituophis vertebralis*.

Blainville's description of *Coluber catenifer* is so meager that one is left uncertain as to which kind of snake he had. His plate indicates that he may have had the less brightly colored coast race. Baird and Girard, in 1853, may be considered to have determined the subsequent use of the term by using the name *Pituophis catenifer* for a specimen from San Francisco. It would seem that this restriction of the name, in the first general review of the genus, should be followed, unless subsequent examination of the original type specimen shows that it did not belong to this race.

In the same publication (p. 71) Baird and Girard, in 1853, proposed the name *Pituophis wilkesii* for two specimens from "Puget Sound, Or.," with gastrosteges numbering 215 and 209, and two from "Oregon", with counts of 209 and 213. This name evidently is based upon specimens of the coast race and has been regarded as a synonym of *Pituophis catenifer.*

Baird and Girard, in 1853 (p. 72), proposed still another name for a western gopher-snake. This was *Pituophis annectens,* based upon one specimen, with 243 gastrosteges, collected at San Diego, California, by Dr. J. L. Leconte.

In 1853, also, Hallowell described *Pityophis heermannii* from a specimen collected on the Cosumnes River, California. His description does not state the number of gastrosteges. The locality is one where specimens more or less intermediate in character but most like the coast race are to be expected. The name may, therefore, be treated as a synonym of *Pituophis catenifer.* The original specimen may perhaps still be preserved in the collection of the Philadelphia Academy of Natural Sciences.

In 1852, Baird and Girard described as *Churchillia bellona* a gopher-snake collected by General Churchill on the left bank of the Rio Grande, at the crossing near Presidio del Norte. The following year, they placed this species in the genus *Pituophis.* Later, the name *Pituophis bellona* or *Pityophis sayi bellona* was used by Cope and other authors for gopher-snakes from parts of California, Arizona and the Great Basin. Stejneger, however, in 1893, called attention to the fact that this name is really a synonym of *Pituophis sayi,* and cannot properly be applied to another race. Stejneger proposed a new name, *Pituophis catenifer deserticola,* for this western race to which the name *bellona* had been misapplied. Stejneger mentions no type specimen, names no type locality and gives no characterization of *Pituophis catenifer deserticola* other than that it is the "richly-colored form from the Great Basin and the southwestern deserts" which must be distinguished from *Pituophis catenifer* by "the totality of the characters," as the number of smooth rows of lateral scales will not serve for this purpose. He merely proposed a substitute name.

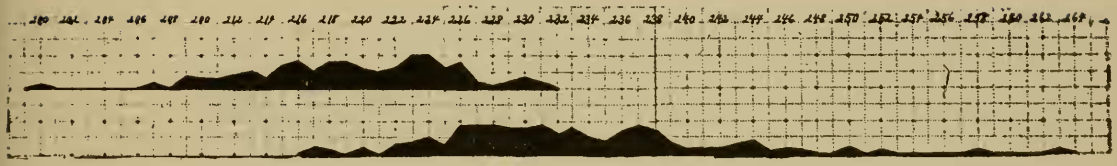
So far as we have been able to learn no one, either before or since, has stated any more definite means of distinguishing these more "richly-colored" snakes from those which have been called *Pituophis catenifer.*

The present study is based upon nearly 300 specimens of the western races of *Pituophis,* all but eight of which represent *Pituophis catenifer* and its subspecies. This material should be large enough to demonstrate any differences in squamation which exists between the two subspecies. Great individual variation is evident in both, but in only one series of scales is there apparent any geographical variation. Only in the counts of the gastrosteges do we find any scale-character which is of value in the classification of these snakes. While this, in one sense, is disappointing, we nevertheless, must be glad to have found even one character which will aid in the separation of these snakes, since reliance upon color differences, which are subject to so much individual variation, and are so difficult to estimate, has resulted in most unsatisfactory determinations.

In the series at hand the differences in the number of gastrosteges in specimens from the northwestern coast counties of California and in others from Arizona, Nevada and Utah is very easily appreciated. If we had specimens only from these localities they might almost be regarded as distinct species, with only an occasional individual of each overlapping the limit of say 230 gastrosteges. Gopher-snakes, however, occur throughout most of the intervening territory and offer gastrostege counts which completely bridge over this difference. We, therefore, must continue to regard these coast and interior races merely as subspecies.

The number of gastrosteges increases from a minimum of 200 in the coast subspecies to a maximum of 263 in the desert subspecies. While individual variation is great in any one locality, it may be said that, in a general way, the warmer and dryer the climate of a given locality the greater the number of gastrosteges. As one proceeds south and east from the cool coast regions toward the interior desert valleys, the average counts gradually increase.

The transition from the number characteristic of the coast snakes to that of the desert snakes is complete and more or less gradual. Nevertheless, these counts are of great use in the separation of the two subspecies.



The specimens which we have studied show gastrostege counts ranging from 200 to 263. No sexual difference is apparent in the counts. We believe that specimens having fewer than 220 gastrosteges may, on that basis alone, be referred to *Pituophis catenifer catenifer,* and that any specimen with more than 231 gastrosteges may be considered to belong to the other subspecies, which has been called *Pituophis sayi bellona* or *Pituophis catenifer deserticola*, properly to be known as *Pituophis catenifer annectens* (Baird & Girard).

The typical specimens of *Pituophis catenifer catenifer* with fewer than 220 gastrosteges are from northern California and western Oregon. Specimens of *Pituophis catenifer annectens* with more than 231 gastrosteges have been found only in southern California, northern Lower California, Arizona, Nevada, and Utah.

A large number of specimens have gastrostege counts varying from 220 to 231. Most of these are from central California and the San Diegan Fauna. They represent geographic intergradation and, to some extent, the extremes of individual variation. A majority of the specimens with 220 to 225 gastrosteges are from the more northern localities and may be referred to *Pituophis catenifer catenifer.* Most of those having counts of 226 to 231 gastrosteges are from the range of *Pituophis catenifer annectens,* and may be so called.

On the accompanying map specimens having from 200 to 220 gastrosteges are indicated by round spots; those having from 231 to 263 by square spots; those with 221 to 225 by half-round spots; and those with from 226 to 230 gastrosteges

by half squares. This serves to bring out quite clearly the fact that the variation is largely geographic.

The localities arranged according to the number of gastrosteges in specimens which represent them are as follows:

200 Gastrosteges

Santa Cruz Island, Santa Barbara County[1]
Corralitos, Santa Cruz County

209

Inverness, Marin County
San Juan, San Benito County
Callahan, Siskiyou County
Roseburg, Douglas County, Oregon

210

Goose Lake Meadows, Modoc County
Napa, Napa County
Pismo, San Luis Obispo County

211

Lagunitas, Marin County
Edna, San Luis Obispo County
Camas Mountains, Douglas County, Oregon
Santa Cruz Island, Santa Barbara County

212

Santa Cruz Island, Santa Barbara County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County

213

Berkeley, Alameda County
Berkeley, Alameda County
Berkeley, Alameda County
Palo Alto, Santa Clara County
Duncan Mills, Sonoma County

[1] All localities in California unless otherwise stated.

214

Carmel, Monterey County
San Francisco
Palo Alto, Santa Clara County

215

Point Reyes Station, Marin County
Mailliard, Marin County
Manzanita, Marin County
Sugar Hill, Modoc County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
Tehama, Tehama County

216

Berkeley, Alameda County
Mt. Diablo, Contra Costa County
San Pablo Valley, Contra Costa County
San Anselmo, Marin County.
Carmel, Monterey County
San Juan, San Benito County
Fort Jones, Siskiyou County

217

Madera, Madera County
San Anselmo, Marin County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
Monte Rio, Sonoma County
Charter Oak, Los Angeles County
Cold Water Canyon, Los Angeles County

218

Walnut Creek, Contra Costa County
Coulterville, Mariposa County
Carmel, Monterey County
Coburn, Monterey County

Coyote, Santa Clara County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
San Jose, Santa Clara County
San Diego County

219

Berkeley, Alameda County
Winslow, Glen County
Middletown, Lake County
Los Baños, Merced County
Carmel, Monterey County
Welby, Monterey County
Lander, Placer County
Soquel, Santa Cruz County
Grand Island Landing, Yolo County

220

Fyffe, El Dorado County
Vicinity of Alturas, Modoc County
Warner Mountains, Modoc County
Bradley, Monterey County
Tracy, San Joaquin County
Palo Alto, Santa Clara County
San Jacinto, Riverside County
San Jacinto, Riverside County

221

Mt. Diablo, Contra Costa County
Clovis, Fresno County
Tracy, San Joaquin County
Coyote Creek, Santa Clara County
Buddha Canyon, Solano County

222

Fyffe, El Dorado County
Indian Creek, San Luis Obispo County
San Juan River, San Luis Obispo County

Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
San Jacinto, Riverside County
Ontario, San Bernardino County
Cuyamaca Mountains, San Diego County

223

Butte Creek, Butte County
Garberville, Humboldt County
Pleasant Valley, Mariposa County
Canby, Modoc County
Carmel, Monterey County
Salinas River, San Luis Obispo County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
Sunnyvale, Santa Clara County
Yolla Bolly Mountain, Trinity County
Tehachapi Mountains, Kern County
Sierra Madre, Los Angeles County
Cahuilla Valley, San Diego County
Fort Douglas, Salt Lake County, Utah

224

Fruto, Glen County
Winslow, Glen County
Kelseyville, Lake County
Willits, Mendocino County
Tracy, San Joaquin County
Indian Creek, San Luis Obispo County
Pismo, San Luis Obispo County
Alma, Santa Clara County
Los Gatos, Santa Clara County
Palo Alto, Santa Clara County
Buttonwillow, Kern County
San Jacinto, Riverside County
Agua Caliente, San Diego County
Campo, San Diego County
Campo, San Diego County

225

Near Gridley, Butte County
Contra Costa, Contra Costa County
Welby, Monterey County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
Palo Alto, Santa Clara County
Soquel, Santa Cruz County
Colton, Riverside County
San Jacinto, Riverside County
Campo, San Diego County

226

Mt. Diablo, Contra Costa County
Mt. Diablo, Contra Costa County
Kelseyville, Lake County
Snelling, Merced County
Carmel, Monterey County
Coburn, Monterey County
Metz, Monterey County
Palo Alto, Santa Clara County
Santa Cruz River, Pima County, Arizona
Tehachapi Mountains, Kern County
San Jacinto Mountains, Riverside County
San Jacinto Mountains, Riverside County
San Bernardino Mountains, Riverside County
Campo, San Diego County
Campo, San Diego County
Campo, San Diego County
Pine Creek, Ventura County

227

Dunlaps, Fresno County
Vicinity of Kinsley, Mariposa County
Sierra Madre, Los Angeles County
San Jacinto Mountains, Riverside County
Campo, San Diego County
Campo, San Diego County

Julian, San Diego County
———, San Diego County
Warner Pass, San Diego County
Virgin River, Humboldt County, Nevada
Fort Douglas, Salt Lake County, Utah

228

San Miguel, San Luis Obispo County
Pasadena, Los Angeles County
San Jacinto, Riverside County
San Jacinto Mountains, Riverside County
Shandon, San Luis Obispo County
Simmler, San Luis Obispo County
Campo, San Diego County
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah

229

Coulterville, Mariposa County
Palo Alto, Santa Clara County
Ensenada, Lower California
South Coronado Island, Lower California
Bakersfield, Kern County
Sierra Madre, Los Angeles County
Sierra Madre, Los Angeles County
Campo, San Diego County
Campo, San Diego County
———, San Diego County

230

Antioch, Contra Costa County
Soledad, Monterey County
Palo Alto, Santa Clara County
Middletown, Lake County
Pasadena, Los Angeles County
San Jacinto, Riverside County

Poso, San Luis Obispo County
Campo, San Diego County
Campo, San Diego County
Campo, San Diego County
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah

231

Riverton, El Dorado County
Los Baños, Merced County
South Coronado Island, Lower California
San Jacinto, Riverside County
San Jacinto, Riverside County
Simmler, San Luis Obispo County
Campo, San Diego County
Campo, San Diego County
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah
Wallula, Walla Walla County, Washington

232

Fort Lowell, Pima County, Arizona
Delano, Kern County
Hesperia, San Bernardino County
Carson, Ormsby County, Nevada
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah

233

Huachuca Mountains, Cochise County, Arizona
La Crescenta, Los Angeles County
Mt. Wilson, Los Angeles County
Benton, Mono County
Campo, San Diego County
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah
Boise, Ada County, Idaho

234

Ontario, San Bernardino County
Virgin Valley, Humboldt County, Nevada
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah

235

Cave Creek, Maricopa County, Arizona
Agua Caliente, San Diego County
Campo, San Diego County
Campo, San Diego County

236

San Martin Island, Lower California
Isabella, Kern County
Campo, San Diego County
———, San Diego County
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah
Boise, Ada County, Idaho

237

Cave Creek, Maricopa County, Arizona
Santa Cruz River, Pima County, Arizona
Bakersfield, Kern County
Sierra Madre, Los Angeles County
Palo Prieto Canyon, San Luis Obispo County
Campo, San Diego County
Campo, San Diego County
Fort Douglas, Salt Lake County, Utah
Wasatch Mountains, Wasatch County, Utah

238

Fort Lowell, Pima County, Arizona
Santa Barbara, Santa Barbara County
Fort Douglas, Salt Lake County, Utah

Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah
Fort Douglas, Salt Lake County, Utah

239

Campo, San Diego County
Carlin, Elko County, Nevada
Fort Douglas, Salt Lake County, Utah

240

Campo, San Diego County
Fort Douglas, Salt Lake County, Utah

241

Victorville, San Bernardino County
Thompson, Grand County, Utah

242

Thousand Creek Flat, Humboldt County, Nevada
Pyramid Lake, Washoe County, Nevada

243

San Jacinto Mountains, Riverside County
Mecca, Riverside County
Pine Forest Mountains, Humboldt County, Nevada

244

Walker Pass, Kern County
Blue Lakes, Twin Falls County, Idaho
Nixon, Washoe County, Nevada
Pyramid Lake, Washoe County, Nevada

245

Cave Creek, Maricopa County, Arizona

246

Palmetto Mountains, Esmeralda County, Nevada
Pine Forest Mountains, Humboldt County, Nevada

247

Silsbee, Imperial County

250

Colorado River, Mojave County, Arizona
Benton, Mono County

252

Mecca, Riverside County

258

Yuma, Yuma County, Arizona

263

Mecca, Riverside County

The complete scale-counts together with the lists of localities where the specimens examined by us were secured are given below under the names of the subspecies to which we have referred the specimens. As we already have said, many of these specimens are from the region of geographical intergradation and some are so intermediate in character that their reference to one or the other subspecies is largely a matter of convenience.

Pituophis catenifer catenifer (Blainville)

Specimens from 78 localities have been studied by us. They represent 29 counties of northern and central California and two of southwestern Oregon.

1. Berkeley, Alameda County, California
2. Butte Creek, Butte County, California
3. Antioch, Contra Costa County, California
4. Contra Costa, Contra Costa County, California
5. Moraga Valley, Contra Costa County, California
6. S. W. Side Mt. Diablo, Contra Costa County, California
7. San Pablo Valley, Contra Costa County, California
8. Two miles east of Walnut Creek, Contra Costa County, California

9. Fyffe, El Dorado County, California
10. Riverton, El Dorado County, California
11. Clovis, Fresno County, California
12. Dunlaps, Fresno County, California
13. Fruto, Glen County California
14. Winslow, Glen County, California
15. Garberville, Humboldt County, California
16. Kelseyville, Lake County, California
17. Lower Lake, Lake County, California
18. Madera, Madera County, California
19. Inverness, Marin County, California
20. Lagunitas, Marin County, California
21. Mailliard, Marin County, California
22. Manzanita, Marin County, California
23. San Anselmo, Marin County, California
24. Coulterville, Mariposa County, California
25. Between Kinsley and Maculey's Stage Station, Mariposa County, California
26. Pleasant Valley, Mariposa County, California
27. Los Baños, Merced County, California
28. Snelling, Merced County, California
29. Between Alturas and Davis Creek, Modoc County, California
30. Goose Lake Meadows, Modoc County, California
31. Sugar Hill, Modoc County, California
32. Dry Creek, Warner Mountains, Modoc County, California
33. Bradley, Monterey County, California
34. Carmel, Monterey County, California
35. Coburn, Monterey County, California
36. Metz, Monterey County, California
37. Soledad, Monterey County, California
38. Welby, Monterey County, California
39. Napa, Napa County, California
40. Lander, near Colfax, Placer County, California
41. San Juan, San Benito County, California
42. San Francisco, San Francisco County, California
43. Tracy, San Joaquin County, California (four mi. west)
44. Edna, San Luis Obispo County, California
45. Indian Creek, San Luis Obispo County, California

46. Pizmo, San Luis Obispo County, California
47. Source of Salinas River, San Luis Obispo County, California
48. San Juan River, San Luis Obispo County, California
49. San Miguel, San Luis Obispo County California
50. Santa Cruz Island, Santa Barbara County, California
51. Alma, Santa Clara County, California
52. Coyote, Santa Clara County, California
53. Coyote Creek, Santa Clara County, California
54. Los Gatos, Santa Clara County, California
55. Palo Alto, Santa Clara County, California
56. San Jose, Santa Clara County, California
57. Stanford University, Santa Clara County, California
58. Sunnyvale, Santa Clara County, California
59. Corralitos, Santa Cruz County, California
60. Soquel, Santa Cruz County, California
61. Callahan, Siskiyou County, California
62. Ft. Jones, Siskiyou County, California
63. Buddha Canyon, Solano County, California (N. W. Corner).
64. Duncan Mills, Sonoma County, California
65. Guerneville, Sonoma County, California
66. Monte Rio, Sonoma County, California
67. Tehama, Tehama County, California
68. Yolla Bolly Mountain, Trinity County, California
69. Grand Island Landing, Yolo County, California
70. Camas Mountains, Douglas County, Oregon
71. Roseburg, Douglas County, Oregon
72. Klamath Falls, Klamath County, Oregon
73. East side Mt. Diablo, Contra Costa County, California
74. Between Live Oak and Gridley, Butte County, California
75. Canby, Modoc County, California
76. Ten miles south from Willits, Mendocino County, California
77. Middletown, Lake County, California
78. Point Reyes Station, Marin County, California

The full scale-counts are as follows:

Scale counts in *Pituophis catenifer catenifer*

Number	Sex	Scale Rows	Gastro-steges	Uro-steges	Supra-labials	Infra-labials	Pre-oculars	Post-oculars	Loreals	Tem-porals	Local-ity
C1589	♀	29	213	71c	X—8	X—X	1—1	3—3	1—1	X—4	1
C2314	♀	31	216	55c	9—8	12—13	1—2	3—3	1—1	4—3	1
C2434	♂	31	219	66c	8—8	12—12	1—1	3—4	1—1	3—3	1
C1626	♂	31	213	71c	8—8	13—13	2—2	3—4	1—1	5—4	1
C848	♂	31	213	71c	8—8	12—12	1—1	3—3	1—1	3—3	1
C4012	♂	29	223	68c	9—8	14—11	2—2	3—3	1—1	3—4	2
43452	♂	31	230	66c	8—8	13—13	2—2	3—3	1—1	3—3	3
C849	♀	31	225	60c	9—9	12—12	1—2	2—2	1—1	2—3	4
43519	♀	31	216	66c	8—8	14—13	2—2	4—4	1—1	4—4	5
C4019	♀	31	226	62c	8—8	14—14	2—2	3—3	1—1	4—3	6
C4018	♂	31	221	68c	8—8	12—12	2—2	3—3	1—1	3—2	6
C5614	♂	29	216	64c	8—8	13—13	2—2	3—3	1—1	3—3	7
C4017	♂	31	218	75c	9—8	13—13	2—2	4—4	1—1	4—4	8
S5631	♀	35	220	64c	8—8	12—12	2—2	3—3	1—1	4—4	9
S5633	♂	29	222	66c	8—9	13—11	2—2	3—3	1—1	3—4	9
39637	♂	31	231	62c	8—9	13—13	2—2	3—3	1—1	4—4	10
27333	♂	31	221	64c	9—8	13—13	2—2	3—3	1—1	4—4	11
C6264	♀	33	227	38+	8—8	14—14	2—2	3—3	1—1	4—4	12
C4016	♀	31	224	66c	8—8	12—13	2—2	3—3	1—1	4—5	13
C4015	♀	31	219	53+	8—9	13—14	2—2	4—4	1—1	4—4	14
C4014	♂	29	224	74c	8—8	13—13	2—2	3—3	1—1	4—5	14
S4220	♂	33	223	74c	9—9	12—11	2—2	3—3	1—1	3—4	15
S1697	♀	31	226	67c	8—9	12—12	2—2	3—3	1—1	4—4	16
S1741	♀	31	224	65c	8—8	12—12	1—1	2—3	1—1	4—4	16
30888	♂	31	X	74c	9—8	13—12	2—2	3—3	1—1	3—3	17
41670	♂	31	217	63c	9—9	13—13	2—2	3—3	1—1	3—4	18
C5285	♂	31	209	70c	9—8	13—13	2—2	3—3	1—1	4—4	19
27326	♂	31	211	68c	8—8	11—11	1—1	3—3	1—1	3—4	20
C975	♀	29	215	64c	8—8	13—13	1—1	3—3	1—1	3—4	21
C4845	♀	29	215	68c	8—8	10—11	2—2	3—3	1—1	2—2	22
C5283	♂	29	216	68c	9—8	12—12	1—1	3—3	1—1	3—3	23
C5282	♂	31	217	70c	8—8	12—12	1—1	3—3	1—1	4—4	23
C5883	♀	33	218	60+	10—10	14—14	2—2	3—3	1—1	3—2	24
C5884	♀	29	229	58c	X—8	X—13	X—2	X—3	X—1	X—X	24
C5885	♀	33	227	55c	10—9	13—13	1—1	4—4	1—1	3—4	25
C5886	♂	31	223	67c	8—8	13—13	2—2	4—4	1—1	4—4	26
41699	♂	31	219	61c	8—8	13—13	2—2	3—3	1—1	4—4	27
C3608	♀	33	231	56c	8—8	13—13	2—2	3—3	1—1	5—5	27
C5595	♀	33	226	58c	8—8	13—13	2—2	3—3	1—1	4—4	28
C2080	♂	31	220	74c	9—X	X—X	2—2	3—3	1—1	4—X	29
C2081	♂	31	210	67c	8—7	12—12	2—2	3—3	1—1	3—4	30
C2082	♂	29	215	67c	7—7	12—12	1—1	3—3	1—1	3—3	31
C2083	♂	31	220	72c	8—8	12—13	2—2	3—3	1—1	5—5	32
43377	♂	31	220	63c	8—8	13—13	2—2	4—3	1—1	2—2	33
13766	♀	31	219	64c	8—8	11—11	2—2	3—3	1—1	3—4	34
13767	♀	31	218	65c	8—8	11—13	2—2	3—3	1—1	3—3	34
13768	♀	33	223	62c	9—8	13—12	2—2	4—4	1—1	4—5	34
13769	♀	31	216	66c	9—9	13—13	2—2	4—4	1—1	4—4	34
13770	♀	31	226	68c	8—9	11—12	2—2	4—5	1—1	3—4	34
17858	♂	31	214	79c	10—9	13—12	2—2	3—4	1—1	4—4	34
43375	♀	29	218	67c	8—8	13—13	2—2	3—4	1—1	4—4	35
43376	♀	31	226	68c	8—8	12—12	2—2	4—3	1—1	4—4	35
43321	♀	31	X	61c	8—8	13—13	2—2	3—3	1—1	5—5	36
43322	♂	31	226	67c	8—8	12—12	1—1	3—3	1—1	4—4	36
43379	♂	33	230	71c	8—9	12—13	2—2	3—3	1—1	3—3	37
43373	♀	31	225	67c	8—8	12—12	2—2	4—3	1—1	4—4	38
43374	♀	31	219	74c	9—8	13—13	2—2	3—4	1—1	5—4	38
C4312	♂	31	210	67c	9—9	13—13	2—2	3—3	1—1	4—4	39
S6500	♀	33	219	62c	9—9	12—12	2—2	3—3	1—1	X—4	40
43412	♂	31	209	70c	8—9	13—13	2—2	4—4	1—1	4—3	41
39261	♀	31	214	58c	8—9	12—13	2—2	3—3	1—1	4—5	42
43521	♂	29	220	64c	8—8	12—12	2—2	3—3	1—1	3—4	43
43522	♀	31	221	55c	8—8	12—14	2—2	3—3	1—1	4—4	43
C2759	♂	33	224	48+	9—8	13—13	2—2	3—3	1—1	3—3	43
43274	♀	29	211	71c	8—8	11—12	1—1	3—3	0—0	3—3	44
43418	♀	33	224	78c	9—10	13—13	2—2	3—3	1—1	4—5	45
43419	♂	33	222	67c	9—8	12—12	2—2	3—3	1—1	3—3	45
43364	♂	31	224	X	8—9	13—12	2—2	3—3	1—1	3—3	46
43365	♀	31	210	71c	8—8	11—11	2—2	3—3	1—1	3—3	46
43413	♂	33	223	67c	8—8	12—13	2—2	3—3	1—1	4—4	47
43414	♀	31	222	66c	8—8	13—13	2—2	3—4	1—1	3—4	48
43382	♂	31	228	69+	8—9	11—12	2—2	3—3	1—1	4—4	49

Scale counts in *Pituophis catenifer catenifer*—Continued

Number	Sex	Scale Rows	Gastro-steges	Uro-steges	Supra-labials	Infra-labials	Pre-oculars	Post-oculars	Loreals	Tem-porals	Local-ity
36120	♂	29	212	70c	8—8	13—13	1—1	4—4	1—1	3—3	50
36121	♀	29	200	54c	9—9	10—10	1—1	3—3	1—1	3—4	50
45131	♂	31	211	71c	9—10	12—12	1—1	4—4	1—1	3—4	..
C6166	♀	33	224	62c	8—8	12—12	1—1	3—3	1—1	2—2	51
43434	♂	31	218	75c	8—8	13—13	1—1	3—4	1—1	4—4	52
S1165	♂	31	221	69c	8—8	14—13	2—2	3—3	1—1	3—4	53
40413	♀	33	224	63c	9—8	13—13	2—2	3—3	1—1	4—3	54
S4026	♂	33	215	68c	8—8	13—14	2—2	4—3	1—1	3—3	55
S1799	♂	31	216	69c	8—8	13—13	2—2	4—3	1—1	4—3	55
S1798	♂	31	218	70c	9—9	12—13	2—2	4—4	1—1	4—4	55
S1808	♂	31	215	61c	8—9	13—13	2—2	3—3	1—1	4—4	55
S4017	♀	31	212	59c	8—8	11—12	1—1	3—3	1—1	3—3	55
S1150	♀	33	214	71c	8—9	12—12	2—2	3—3	1—1	3—3	55
41667	♂	33	218	73c	9—8	13—14	2—2	3—3	1—1	3—3	56
S1119	♀	31	229	60c	9—9	12—13	2—2	4—3	1—1	3—4	57
S1118	♂	31	215	73c	8—8	12—12	2—2	3—3	1—1	3—3	57
S1773	♀	33	224	53c	8—9	11—11	2—2	3—3	1—1	3—3	57
S1168	♀	33	225	61c	8—8	13—13	2—2	3—4	1—1	4—4	57
S1117	♀	33	226	61c	8—8	12—11	2—2	3—4	1—1	4—5	57
S5806	♀	33	230	56c	8—8	12—12	2—2	3—3	1—1	4—4	57
S1749	♀	33	223	63c	9—9	14—13	2—2	3—3	1—1	4—2	57
S1748	♂	31	220	66c	8—8	13—11	2—2	3—3	1—1	3—2	57
S1752	♂	31	217	74c	8—8	12—12	2—2	3—3	1—1	4—3	57
S7195	♀	33	225	60c	10—10	13—12	2—2	3—3	1—1	4—5	57
S1167	♀	31	222	58c	9—9	13—12	2—2	3—3	1—1	3—4	57
S4042	♂	31	223	72c	8—8	12—13	2—1	3—3	1—1	3—3	57
S4047	♂	33	217	68c	8—8	13—13	1—1	3—3	1—1	3—3	57
S4044	♀	31	225	69c	8—8	13—13	2—2	3—3	1—1	4—4	57
S4045	♂	31	218	59c	8—8	12—13	2—2	3—3	1—1	3—4	57
S4043	♂	31	222	64c	8—8	11—12	2—1	3—3	1—1	3—4	57
S1747	♀	31	222	62c	8—8	13—12	2—2	4—4	1—1	4—4	57
S1171	♂	31	220	67c	8—8	13—13	2—2	3—3	1—1	3—3	57
S1169	♂	33	212	71c	8—9	13—13	2—2	4—4	1—1	4—4	57
S1751	♀	31	213	56c	9—9	12—11	2—2	3—3	1—1	4—4	57
41671	♂	31	212	72c	8—9	12—11	2—2	3—3	1—1	3—4	57
43440	♂	31	223	67c	8—8	13—12	1—2	3—3	1—1	4—4	58
S4092	♂	33	207	69c	8—8	12—12	2—2	3—3	1—1	4—4	59
S1681	♂	31	225	73c	9—9	12—12	2—2	3—3	1—1	3—3	60
S1772	♂	31	219	67c	8—8	12—13	2—2	3—3	1—1	3—3	60
36061	♂	31	209	76c	8—8	10—10	2—2	3—3	1—1	4—4	61
S1740	♂	31	216	62c	9—8	12—13	2—2	3—3	1—1	4—4	62
43523	♀	31	221	65c	8—9	13—13	2—2	3—4	1—1	3—3	63
27942	♂	29	213	74c	9—9	11—11	2—2	3—3	1—1	4—4	64
C4911	♂	31	212	72c	9—8	12—12	1—2	3—3	1—1	5—4	65
C4131	♀	31	217	62c	8—9	12—12	2—2	3—3	1—1	4—4	66
C4013	♂	29	215	71c	9—8	13—13	2—2	3—3	1—1	4—4	67
C5284	♀	31	223	68c	8—9	14—13	2—2	3—3	1—1	4—4	68
C4011	♂	29	219	73c	8—8	12—12	2—2	4—5	1—1	4—6	69
29492	♂	31	211	75c	8—8	11—11	2—2	3—4	1—1	4—4	70
S4062	♂	29	209	70c	8—7	11—11	2—2	3—3	1—1	4—4	71
20413	♀	31	210+	56c	8—8	12—X	2—2	3—3	1—1	4—4	72
44194	♀	31	226	58c	9—9	13—13	2—2	4—3	1—1	4—4	73
44161	♀	31	225	60c	8—8	13—13	2—2	3—3	1—1	5—5	74
44241	♀	31	223	65c	9—8	13—13	2—2	3—3	1—1	3—3	75
44943	♀	33	224	65c	8—8	13—13	2—2	3—3	1—1	4—4	76
45119	♂	31	216	33	8—7	13—13	2—2	3—3	1—1	3—3	41
45120	♀	31	230	64c	8—8	13—13	2—2	3—3	1—1	4—4	77
45121	♀	31	219	62c	9—8	13—14	2—2	3—4	1—1	4—4	77
45127	♂	31	215	72c	8—8	13—13	2—2	3—3	1—1	4—4	78

Pituophis catenifer annectens (Baird & Girard)

To this name we refer specimens from 60 localities in Mexico, Arizona, Nevada, Utah, Idaho, eastern Washington, and ten counties in southern California

1. Ensenada, Lower California, Mexico
2. San Martin Island, Lower California, Mexico
3. South Coronado Island, Lower California, Mexico
4. Huachuca Mountains, Cochise County, Arizona
5. Cave Creek, Maricopa County, Arizona
6. Colorado River, above Bill Williams River, Mohave County, Arizona
7. Ft. Lowell, Pima County, Arizona
8. Santa Cruz River, Pima County, Arizona
9. Yuma, Yuma County, Arizona
10. Silsbee, Imperial County, California
11. Bakersfield, Kern County, California (eight mi. N. E.).
12. Buttonwillow, Kern County, California
13. Delano, Kern County, California
14. Isabella, Kern County, California
15. Tehachapi Mountains, Kern County, California
16. Walker Pass, Kern County, California
17. Charter Oak, Los Angeles County, California
18. Cold Water Canyon, Los Angeles County, California
19. La Crescenta, Los Angeles County, California
20. Mt. Wilson, Los Angeles County, California
21. Pasadena, Los Angeles County, California
22. Sierra Madre, Los Angeles County, California
23. Benton, Mono County, California
24. Colton, Riverside County, California
25. San Jacinto, Riverside County, California
26. San Jacinto Mountains, Riverside County, California
27. Mecca, Riverside County, California
28. Riverside, Riverside County, California
29. San Bernardino Mts., Riverside County, California
30. Hesperia, San Bernardino County, California
31. Ontario, San Bernardino County, California
32. Victorville, San Bernardino County, California
33. Palo Prieto Canyon, San Luis Obispo County, California

34. Pozo, San Luis Obispo County, California
35. Shandon, San Luis Obispo County, California
36. Simmler, San Luis Obispo County, California
37. Agua Caliente, San Diego County, California
38. Cahuilla Valley, San Diego County, California
39. Campo, San Diego County, California
40. Cuyamaca Mountains, San Diego County, California
41. Julian, San Diego County, California
42. San Diego County, California
43. Warner Pass, San Diego County, California
44. Santa Barbara, Santa Barbara County, California
45. Pine Creek, Ventura County, California
46. Blue Lakes, Twin Falls County, Idaho
47. Carlin, Elko County, Nevada
48. Palmetto Mountains, Esmeralda County, Nevada
49. Big Creek, Pine Forest Mountains, Humboldt County, Nevada
50. Thousand Creek Flat, Humboldt County, Nevada
51. Virgin Valley, Humboldt County, Nevada
52. Austin, Lander County, Nevada
53. Carson, Ormsby County, Nevada
54. Nixon, Washoe County, Nevada
55. Pyramid Lake, Washoe County, Nevada
56. Thompson, Grand County, Utah
57. Fort Douglas, Salt Lake County, Utah
58. Wasatch Mountains, Wasatch County, Utah
59. Wallula, Walla Walla County, Washington
60. Boise, Ada County, Idaho

The full scale-counts are as follows:

Scale counts in *Pituophis catenifer annectens*

Number	Sex	Scale Rows	Gastro-steges	Uro-steges	Supra-labials	Infra-labials	Pre-oculars	Post-oculars	Loreals	Tem-porals	Local-ity
8575	♂	31	229	76c	8—9	13—14	2—2	4—3	1—1	3—4	1
8678	♂	31	236	76c	8—9	13—13	1—1	3—3	1—1	4—4	2
13588	♀	31	231	65c	8—8	12—12	2—2	3—3	1—1	....	3
13589	♀	35	229	71c	9—9	13—13	2—2	3—3	1—1	3—3	3
34755	♀	33	233	57c	8—8	13—14	1—1	3—4	1—1	4—4	4
17541	♂	31	237	64c	9—9	14—14	2—2	4—4	1—1	3—3	5
17546	♀	35	245	60c	9—9	12—12	1—1	3—3	1—1	....	5
17547	♂	31	235	57c	8—8	12—12	1—1	3—3	1—1	4—4	5
1824	♀	33	250	60c	8—10	12—12	2—2	3—3	1—1	4—5	6
S1131	♀	31	238	56c	8—8	X—12	1—1	3—3	1—1	4—4	7
S1705	♂	33	X	68c	8—9	13—13	2—2	3—3	1—1	4—4	7
S1714	♀	33	232	52c	8—8	13—13	1—1	4—3	1—1	5—4	7
33869	♀	33	237	59c	9—10	12—12	1—1	3—4	1—1	2—3	8
33870	♂	31	226	64c	8—8	13—13	1—1	3—3	1—1	3—3	8
33447	♀	33	258	59c	8—8	12—12	1—1	4—5	1—1	3—3	9
C1003	♀	33	247	50c	9—8	13—13	2—2	3—3	1—1	5—5	10
C2761	♀	35	229	57c	8—8	13—13	2—2	3—3	1—1	3—4	11
C2760	♂	31	237	59c	9—8	12—12	2—2	3—3	1—1	4—4	11
39553	♂	33	224	60c	8—8	13—13	2—2	3—3	1—1	3—4	12
43381	♂	33	232	60c	9—9	13—13	2—2	3—3	1—1	5—5	13
39595	♂	31	236	65c	8—8	13—12	2—2	3—3	1—1	3—4	14
38958	♂	33	226	72c	8—8	13—13	2—2	3—3	1—1	3—4	15
38959	♀	35	223	62c	8—10	13—12	2—2	3—3	1—1	3—4	15
C2798	♀	33	244	58c	8—8	13—12	2—2	3—3	1—1	3—2	16
S5163	♂	33	217	73c	8—8	14—13	1—1	3—3	1—1	3—4	17
38918	♂	31	217	75c	8—8	11—11	1—1	3—3	1—1	4—4	18
40003	♀	33	233	67c	9—8	13—13	2—2	3—4	1—1	4—6	19
C4311	♂	31	233	69c	8—9	11—13	2—2	3—3	1—1	4—4	20
C749	♂	33	228	73c	8—8	13—13	2—2	3—3	1—1	3—3	21
C750	♀	33	230	63c	8—8	13—11	1—1	3—3	1—1	4—4	21
C4313	♀	31	229	64c	9—9	13—13	2—2	3—3	1—1	5—5	22
C4310	♂	31	227	73c	9—9	13—13	1—1	3—3	1—1	5—5	22
27534	♀	33	237	70c	8—9	13—13	2—2	4—4	1—1	4—4	22
27774	♂	31	223	71c	9—9	12—13	2—2	3—3	1—1	3—3	22
27806	♀	33	229	70c	9—8	13—13	2—2	3—3	1—1	4—4	22
C3716	♀	31	233	56c	8—9	13—13	2—2	3—3	1—1	5—5	23
C3715	♀	31	250	59c	8—8	12—12	2—2	3—3	1—1	4—4	23
C75	♀	33	225	65c	9—9	13—13	2—2	3—3	1—1	3—4	24
S1197	♂	31	228	78c	9—9	13—13	2—2	4—4	1—1	5—5	25
S1164	♂	33	230	78c	9—8	12—12	2—2	3—4	1—1	3—3	25
S1784	♂	29	231	77c	9—9	13—13	2—2	4—3	1—1	3—4	25
S1166	♀	33	231	66c	9—8	13—13	2—2	3—3	1—1	3—3	25
S1122	♂	31	220	75c	8—8	13—13	1—1	3—3	1—1	3—3	25
S4008	♀	31	220	73c	8—8	11—10	1—1	3—3	1—1	4—4	25
S1146	♂	33	224	73c	9—9	13—13	2—2	4—4	1—1	5—5	25
S1135	♂	33	225	85c	8—8	12—12	1—1	4—4	1—1	4—4	25
S1750	♂	33	222	75c	9—9	14—13	1—2	4—4	1—1	4—4	25
C104	♂	31	243	78c	9—8	12—14	2—1	3—3	1—1	3—3	26
C553	♂	33	226	62c	8—9	13—13	2—2	3—3	1—1	4—5	26
C343	♂	31	227	81c	8—8	13—12	2—2	3—3	1—1	4—3	26
C551	♀	31	226	71c	9—9	12—13	2—2	3—3	1—1	4—4	26
C552	♂	33	228	73c	8—8	13—13	2—2	3—3	1—1	3—4	26
C469	♀	35	263	58c	8—8	12—12	1—1	3—3	1—1	4—3	27
C470	♂	31	252	65c	9—8	12—12	2—2	3—3	1—1	4—5	27
C471	♀	33	243	55c	8—8	12—12	1—2	3—3	1—1	3—4	27
S5240	♀	33	X	69c	8—8	13—13	2—2	4—4	1—1	4—4	28
S6464	♀	33	226	77c	8—8	13—13	1—1	3—3	1—1	3—3	29
36285	♀	33	232	49+	8—8	13—13	2—2	4—4	1—1	4—5	30
S4291	♂	33	222	63+	9—9	14—13	2—2	4—4	1—1	4—4	31
S4268	♀	31	234	68c	8—8	13—13	2—2	4—4	1—1	4—3	31
C5365	♀	31	241	61c	9—9	12—12	2—2	4—4	1—1	4—4	32
43383	♀	31	237	59c	8—8	13—13	2—2	3—3	1—1	3—4	33
43347	♀	31	230	64c	8—9	13—14	2—1	4—4	1—1	5—3	34
43429	♀	37	228	67c	9—8	14—14	2—2	4—4	1—1	4—5	35
C2763	♂	31	228	63c	8—8	13—13	2—2	3—3	1—1	3—4	36
C2764	♂	33	231	67c	8—8	14—12	2—2	3—3	1—1	4—5	36
S1163	♀	33	224	62c	8—8	12—12	2—1	3—3	1—1	3—3	37
S1162	♀	31	235	74c	9—9	12—12	2—2	3—3	1—1	3—3	37
S4050	♂	31	223	73c	8—8	12—13	1—1	3—X	1—1	4—X	38
40060	♂	31	229	77c	8—8	13—14	2—2	3—4	1—1	4—4	39
40061	♂	31	233	74c	8—8	11—12	2—2	3—3	1—1	3—4	39
40062	♂	33	226	79c	9—9	14—14	2—2	5—5	1—1	5—5	39

Scale counts in *Pituophis catenifer annectens*—Continued

Number	Sex	Scale Rows	Gastro-steges	Uro-steges	Supra-labials	Infra-labials	Pre-oculars	Post-oculars	Loreals	Tem-porals	Local-ity
40063	♂	33	231	77c	9—9	14—14	2—2	4—3	1—1	3—5	39
40064	♀	35	239	71c	9—9	13—13	2—2	3—3	1—1	3—4	39
40065	♀	33	237	70c	9—8	14—13	2—2	3—3	1—1	4—4	39
40066	♂	33	224	71c	8—8	12—12	1—1	4—3	1—1	3—4	39
40067	♀	33	240	66+	8—8	13—13	1—1	3—3	1—1	4—5	39
40068	♂	31	231	78c	8—8	13—13	1—1	3—3	1—1	3—4	39
40069	♂	31	236	78c	8—8	12—13	1—1	3—3	1—1	4—5	39
40070	♂	33	227	77c	8—8	14—13	1—1	3—3	1—1	2—3	39
40071	♀	31	229	69+	9—8	14—15	2—2	5—4	1—1	4—4	39
40072	♂	33	226	74c	8—8	12—13	1—1	3—3	1—1	2—4	39
40073	♂	33	225	76c	8—8	13—13	2—2	3—3	1—1	4—4	39
40074	♂	33	230	72c	8—8	12—12	2—2	4—4	1—1	4—4	39
40075	♀	35	237	71c	8—8	13—13	2—2	4—4	1—1	4—4	39
40076	♂	33	230	78c	9—8	13—13	1—2	4—4	1—1	4—5	39
40077	♀	35	227	83c	8—9	13—13	2—2	3—3	1—1	4—5	39
40078	♀	33	235	68c	8—8	13—14	2—2	3—3	1—1	3—5	39
40079	♂	33	228	38+	8—8	14—14	1—1	3—4	1—1	3—3	39
40080	♂	31	230	73c	8—8	12—13	1—1	3—3	1—1	3—4	39
40081	♀	35	224	77c	8—8	14—13	2—2	4—3	1—1	4—4	39
40082	♀	35	235	65c	9—9	13—13	2—2	4—4	1—1	5—6	39
C623	♂	31	222	76c	9—9	13—13	1—1	3—4	1—1	4—4	40
C622	♂	33	227	66+	9—9	13—13	2—1	3—2	1—1	3—3	41
S1160	♂	33	229	84c	8—8	13—14	2—2	3—3	1—1	3—3	42
S1149	♂	33	227	69c	9—8	13—13	2—2	3—4	1—1	3—3	42
S1155	♀	31	236	73c	9—9	12—12	1—1	2—4	1—1	2—2	42
S1170	♀	33	218	64c	8—9	13—13	2—2	4—4	1—1	3—3	42
C1040	♂	33	227	77c	9—8	13—13	2—2	3—3	1—1	4—4	43
C3819	♂	33	238	44+	8—8	13—13	2—2	3—3	1—1	4—4	44
43520	♂	33	226	78c	8—8	13—13	2—2	3—3	1—1	4—4	45
S4064	♀	31	244	59c	8—8	12—12	1—1	4—3	1—1	4—2	46
40925	♀	33	239	57c	8—8	13—13	2—2	3—3	1—1	5—5	47
S5649	♂	31	246	64c	9—9	14—13	2—2	3—3	1—1	4—4	48
C1529	♀	29	243	59c	8—8	11—12	2—2	3—3	1—1	3—3	49
C1528	♂	31	246	63c	8—8	12—12	2—2	3—3	1—1	4—4	49
C1274	♂	33	242	58c	8—8	13—13	2—2	3—4	1—1	6—3	50
C1275	♂	31	227	66c	9—9	13—13	2—2	4—4	1—1	6—6	51
C1276	♂	29	234	62c	8—8	13—13	2—2	3—3	1—1	3—4	51
37808	♂	29	226	66c	8—8	13—13	1—1	2—2	1—1	4—4	52
S....	♀	29	232	58c	8—8	12—13	2—2	3—3	1—1	4—4	53
S....	♀	33	244	58c	9—9	14—13	2—2	3—3	1—1	4—4	54
S6406	♀	33	244	63c	8—8	13—13	2—2	3—3	1—1	3—4	55
40504	♂	31	242	66c	8—8	14—12	1—1	3—3	1—1	3—3	55
40961	♂	31	241	65c	8—8	12—12	2—2	4—4	1—1	4—4	56
14207	♂	29	233	60c	8—8	13—14	1—1	3—3	1—1	4—5	57
27198	♂	31	232	68c	8—8	13—13	1—1	3—3	1—1	3—5	57
27199	♂	29	230	63c	8—8	13—12	1—1	3—3	1—1	3—4	57
30913	♂	29	228	66c	8—8	X—12	1—1	3—3	1—1	4—4	57
30914	♂	29	236	60c	9—8	12—12	1—1	3—3	1—1	4—X	57
30915	♂	29	238	67c	9—9	13—13	1—1	2—2	1—1	3—4	57
30916	♀	31	240	61c	9—9	13—13	1—1	2—2	1—1	4—4	57
30917	♂	29	227	65c	8—8	12—13	1—1	2—3	1—1	4—4	57
30918	♂	29	233	58c	9—8	12—12	1—1	2—2	1—1	4—4	57
30919	♂	27	228	66c	8—8	12—13	1—1	3—3	1—1	3—4	57
30920	♀	29	223	55c	8—9	11—12	2—2	3—3	1—1	3—4	57
38756	♂	29	230	71c	9—9	13—13	1—1	2—2	1—1	3—4	57
38757	♂	29	232	62c	8—8	13—13	1—1	2—2	1—1	4—5	57
14193	♂	31	238	67c	8—8	12—X	1—1	2—2	1—1	4—5	57
14194	♀	29	239	59c	X—X	X—X	X—X	X—X	X—X	X—X	57
14195	♂	31	238	66c	8—8	11—11	1—1	2—2	1—1	3—3	57
14196	♂	29	231	68c	X—X	X—X	X—X	X—X	X—X	X—X	57
14197	♂	X	228	66c	X—X	X—X	X—X	X—X	X—X	X—X	57
14198	♀	29	238	61c	8—8	13—13	1—1	3—3	1—1	4—4	57
14199	♂	27	234	70c	9—X	13—X	1—1	3—3	1—1	2—3	57
14200	♂	27	231	70c	8—9	12—13	1—1	2—2	1—1	3—4	57
14201	♂	25	234	66c	8—8	13—13	1—1	3—3	1—1	3—4	57
14202	♂	31	234	70c	9—9	13—13	1—1	3—3	1—1	3—4	57
14203	♂	29	238	66c	9—9	12—12	1—1	2—2	1—1	4—4	57
14204	♀	27	237	62c	8—8	13—12	1—1	2—2	1—1	3—4	57
14205	♂	X	X	67c	X—X	X—X	X—X	X—X	X—X	X—X	57
14206	♂	29	236	66c	X—X	X—X	X—X	X—X	X—X	X—X	57
38755	♂	31	237	70c	8—9	11—11	2—2	3—3	1—1	3—4	58
C5577	♀	29	231	61c	8—8	11—11	2—2	3—3	1—1	3—3	59
45129	♂	31	233	63c	8—8	12—11	2—1	4—3	1—1	4—4	60
45130	♂	29	236	64c	8—8	12—12	1—2	3—3	1—1	4—5	60

Pituophis vertebralis (Blainville)

We now have at hand no specimens of this gopher-snake. Its range seems to be restricted to the Cape Region of Lower California. It agrees with *Pituophis catenifer annectens* in the number of its gastrosteges. The large amount of red in its coloration enables one to distinguish it readily from both subspecies of *Pituophis catenifer*. That it also seems to have a larger number of scale-rows is shown by the counts reprinted below.

Scale counts in *Pituophis vertebralis*

Specimen	Scale Rows	Gastrosteges	Urosteges	Supralabials	Infralabials	Preoculars	Postoculars	Loreals
Type	..	245	64	....	.....	2	3	2
Cal. Acad. Sci.	35	239	64	8—9	13—13	2—2	3—3	....
" " "	35	243	67	9—9	12—12	2—2	3—3	....
" " "	33	234	65	9—9	12—12	2—2	3—3	....
" " "	34	251	60	9—9	13—13	2—2	3—3	....
" " "	35	245	61	9—10	13—13	2—2	3—3	....
" " "	35	233	63	9—9	12—12	2—2	3—3	....
" " "	35	243	62	10—9	12—12	1—1	3—3	....
Cope	..	247	61	9—9	12—12	2—2	3—3	....

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